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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,509	05/11/2004	Chih-Hsiang Yang	11585-US-PA	3508
31561 7590 01/02/2008 JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			EXAMINER MANDEVILLE, JASON M	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 01/02/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/709,509	YANG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jason M. Mandeville	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>18 March 2007</u> .                                           | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 9-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Claim 9** recites the limitation "the light source brightness balance module" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. **Claim 10** depends from **Claim 9** and is thus also rejected as being indefinite.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-3 and 5-10** are rejected under 35 U.S.C. 102(b) as being anticipated by Nitta et al. (hereinafter "Nitta" US 2002 / 0057238).

5. As pertaining to **Claim 1**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) a blinking backlight device (36), comprising:

a storage unit (50; see Fig. 18), for storing at least one (N-1)th frame data (see Page 12, Para. [0098]); and

a blinking control module (25, 23), having an image detection unit (25), connected to a data source (DATA; also see (29-33)) and the storage unit (50), for receiving a Nth frame data (i.e., DATA) and comparing the Nth frame data and the (N-1)th frame data (i.e., previous DATA) read from the storage unit (50) according to a motion image detection algorithm to output a detection signal (see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]); wherein N is a positive integer larger than or equal to 2 (again, see Page 12, Para. [0098]).

6. As pertaining to **Claim 2**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the motion image detection algorithm detects whether an image displayed by the blinking backlight device (36) is a motion image or not (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

7. As pertaining to **Claim 3**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the when the image displayed by the blinking backlight device (36) comprises a motion image, a blinking backlight is enabled by the detection signal (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

8. As pertaining to **Claim 5**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the when the blinking backlight device (36) further comprises a light source brightness balance module (25), having a cycle (i.e., duty cycle) and brightness control unit (52, 53, 54), for processing a received scan signal (VSYNC, HSYNC) and a clock signal (DOTCK) to output a light source duty cycle signal and a brightness control signal (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

9. As pertaining to **Claim 6**, Nitta discloses (see Fig. 1, Fig. 17; and Fig. 18) that the cycle and brightness control unit (52, 53, 54) comprises a duty cycle control mechanism, for controlling a duty cycle of a fluorescence lamp (8) when the fluorescence lamp (8) is activated (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]); and

a brightness control mechanism, for controlling a brightness of the fluorescence lamp (8) according to whether the image displayed by the blinking backlight device (36) is the motion image or not (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

10. As pertaining to **Claim 7**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the light source brightness balance module (25) further comprises a signal synchronization unit (51, 53, 54) connected to the cycle and brightness control unit (52, 53, 54) for synchronizing the scan signal (VSYNC, HSYNC) and the clock signal (DOTCK; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

11. As pertaining to **Claim 8**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the fluorescence lamp (8) comprises cold cathode fluorescence lamp (CCFL; see Page 11, Para. [0089]).

12. As pertaining to **Claim 9**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the light source brightness balance module (25) further comprises a data latch (35) connected to the image detection unit (25) and the storage unit (50) for outputting a frame data received and stored in the storage unit (50; again, see Page 3,

Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

13. As pertaining to **Claim 10**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the storage unit (50) comprises:

a storage medium (50), for storing the frame data ; and

a storage interface controller (implicit in (50) and represented by input/output arrows in Fig. 18), connected to the storage medium for storing and reading the frame data stored in the storage medium (50; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]; the storage interface controller is implicit in the use of storage medium (50) in order to store and read the frame data).

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 4 and 11-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al. (hereinafter "Nitta" US 2002 / 0057238) in view of Hirakata et al. (hereinafter "Hirakata" US 2002 / 0067332).

16. As pertaining to **Claim 4**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the image displayed by the blinking backlight device (36) is not a motion image, a blinking backlight is driven with lighting period set to be 60% or larger (see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]). Further, Nitta discloses that the conventional technique for driving an image that is not a motion image is with an "all-the-time lighting up", which constitutes a disabling of the blinking backlight. Therefore, it would have been obvious to one of ordinary skill in the art at the time when the invention was made that when the image displayed by the blinking backlight device (36) is not a motion image, a blinking backlight is disabled by the detection signal (i.e., driving by "all-the-time lighting up").

An example of this technique is provided by Hirakata (see Fig. 1A-1E). Hirakata discloses a blinking backlight device comprising a blinking control module (see Fig. 6) wherein a motion image detection algorithm detects whether an image displayed by the blinking backlight device is a motion image or not (see Page 10 through Page 11, Para. [0248]-[0266]). Hirakata discloses that when the image displayed by the blinking backlight device is a motion image, a blinking backlight is enabled (see Fig. 1C-1E); and when the image displayed by the blinking backlight device is not a motion image, a



blinking backlight is disabled (see Fig. 1B; also see Page 11 through Page 12, Para. [0267]-[0279]). The inventions of Nitta and Hirakata are in the same field of endeavor and both provide a means for controlling a blinking backlight to display motion images. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nitta and Hirakata.

17. As pertaining to **Claim 11**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) a method (see Fig. 1, Fig. 17, and Fig. 18) of operating a blinking backlight device (36), comprising:

determining whether an image displayed comprises a motion image or not according to two continuous frame data (see (50) in Fig. 18; also see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]);

when the image displayed comprises a motion image, a blinking backlight is enabled (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

Nitta discloses that when the image displayed does not comprise a motion image, a blinking backlight is driven with lighting period set to be 60% or larger (see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12,

Para. [0094]-[0099]). Further, Nitta discloses that the conventional technique for driving an image that is not a motion image is with an "all-the-time lighting up", which constitutes a disabling of the blinking backlight. Therefore, it would have been obvious to one of ordinary skill in the art at the time when the invention was made that when the image displayed does not comprise a motion image, a blinking backlight is disabled (i.e., driven by "all-the-time lighting up").

An example of this technique is provided by Hirakata (see Fig. 1A-1E). Hirakata discloses a method of operating a blinking backlight device comprising the use of a blinking control module (see Fig. 6) wherein a motion image detection algorithm detects whether an image displayed by the blinking backlight device is a motion image or not (see Page 10 through Page 11, Para. [0248]-[0266]). Hirakata discloses that when the image displayed by the blinking backlight device is a motion image, a blinking backlight is enabled (see Fig. 1C-1E); and when the image displayed by the blinking backlight device is not a motion image, a blinking backlight is disabled (see Fig. 1B; also see Page 11 through Page 12, Para. [0267]-[0279]). The inventions of Nitta and Hirakata are in the same field of endeavor and both provide a means for controlling a blinking backlight to display motion images. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nitta and Hirakata.

18. As pertaining to **Claim 12**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the method further comprises adjusting a brightness of a light source (8; see Page 3,

Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

19. As pertaining to **Claim 13**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the method of determining whether to adjust the brightness of the light source (8) of not comprises determining whether an image displayed by the blinking backlight device (36) comprises the motion image or not according to a scan signal (VSYNC, HSYNC) and a clock signal (DOTCK) (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

20. As pertaining to **Claim 14**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the image displayed by the blinking backlight device (36) comprises the motion image, a brightness control signal is outputted to increase the brightness of the light source (8; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

21. As pertaining to **Claim 15**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the image displayed by the blinking backlight device (36) does not comprise the motion image, a brightness control signal is outputted to decrease the brightness of the light source (8; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5,

Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nose (US 2003 / 0001983) discloses a backlight control circuit and method.

Ham (US 2002 / 0175886) discloses a backlight control method using blinking.

Funamoto et al. (US 6,980,225) discloses a backlight control circuit and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Mandeville whose telephone number is 571-270-3136. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Jason Mandeville  
Examiner  
19 December 2007

JMM

A handwritten signature in black ink, appearing to read "Alexander Eisen", with a stylized flourish at the end.

ALEXANDER EISEN  
SUPERVISORY PATENT EXAMINER